

Title (en)

METHOD AND DEVICE FOR PERFORMING BEAMFORMING IN WIRELESS COMMUNICATION SYSTEM

Title (de)

VERFAHREN UND VORRICHTUNG ZUR DURCHFÜHRUNG VON STRAHLFÖRMUNG IN EINEM DRAHTLOSKOMMUNIKATIONSSYSTEM

Title (fr)

PROCÉDÉ ET DISPOSITIF DE RÉALISATION DE FORMATION DE FAISCEAU DANS UN SYSTÈME DE COMMUNICATION SANS FIL

Publication

**EP 3820053 A4 20210804 (EN)**

Application

**EP 19830342 A 20190702**

Priority

- KR 20180078174 A 20180705
- KR 2019008058 W 20190702

Abstract (en)

[origin: EP3820053A1] Disclosed is a 5G or pre-5G communication system for supporting a data transmission rate higher than that of a 4G system such as LTE. According to one embodiment, disclosed is a method by which a base station performs downlink beamforming in a wireless access system, comprising the steps of, receiving, from a terminal, information related to a channel state, checking, on the basis of the information related to a channel state, channel state information estimated by subcarrier group unit, acquiring analog beamforming information and digital beamforming information on the basis of the channel state information, performing, by subcarrier group unit, hybrid beamforming in which the analog beamforming and the digital beamforming are combined, on the basis of the analog beamforming information and the digital beamforming information, and transmitting subcarrier group information corresponding to the subcarrier group, wherein the number of subcarriers in the subcarrier group is no more than the number of subcarriers included in one resource block.

IPC 8 full level

**H04B 7/0456** (2017.01); **H04B 7/06** (2006.01)

CPC (source: EP KR US)

**H04B 7/0456** (2013.01 - KR US); **H04B 7/0617** (2013.01 - EP KR US); **H04B 7/0626** (2013.01 - EP KR US); **H04L 5/0048** (2013.01 - US); **H04L 5/0057** (2013.01 - US)

Citation (search report)

- [Y] WO 2018031807 A1 20180215 - IDAC HOLDINGS INC [US]
- [XAYI] HUAWEI ET AL: "CSI-RS design for beam management", vol. RAN WG1, no. Qingdao, China; 20170627 - 20170630, 26 June 2017 (2017-06-26), XP051299172, Retrieved from the Internet <URL:http://www.3gpp.org/ftp/Meetings\_3GPP\_SYNC/RAN1/Docs/> [retrieved on 20170626]
- [Y] GUANGXU ZHU ET AL: "Hybrid Beamforming via the Kronecker Decomposition for the Millimeter-Wave Massive MIMO Systems", ARXIV.ORG, CORNELL UNIVERSITY LIBRARY, 201 OLIN LIBRARY CORNELL UNIVERSITY ITHACA, NY 14853, 12 April 2017 (2017-04-12), XP080762471, DOI: 10.1109/JSAC.2017.2720099
- See references of WO 2020009432A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3820053 A1 20210512; EP 3820053 A4 20210804**; CN 112425083 A 20210226; CN 112425083 B 20230613; KR 102441982 B1 20220913; KR 20200005028 A 20200115; US 11476910 B2 20221018; US 2021288704 A1 20210916; WO 2020009432 A1 20200109

DOCDB simple family (application)

**EP 19830342 A 20190702**; CN 201980045388 A 20190702; KR 20180078174 A 20180705; KR 2019008058 W 20190702; US 201917257797 A 20190702